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ABSTRACT

The study investigated (a) relationships between measures on study habits and attitudes, locus of control, achieving tendency, and semester grade-point averages (SGPA), (b) differences between the sexes on the above mentioned variables, and (c) best predictor of SGPA. The subjects were 39 males and 81 females. There were a number of significant relationships between these variables for the total group and for each of the sexes. Some of the relationships were positive, others were inverse. Results showed females obtaining higher scores on five study skills scales and SGPA and males obtaining higher scores on Powerful Others and Chance scales of the locus of control inventory. The best predictor of SGPA was one's Study Habits measure. (Author)

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Interrelationships of Study Habits and Attitudes, Locus of Control, Motivation Achievement Tendencies and Academic Achievement*

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The purpose of the present study was to examine whether there were significant relationships between study habits and attitudes, locus of control, achieving tendency and academic achievement and differences between the sexes on each of these variables.

Psychologists and educators have for years felt that study habits and attitudes, particularly the mechanics and conditions, the attitudes towards study and motivation, were related to one's academic achievement. The central issue in a locus of control theory (Levenson, 1972; Rotter, 1966; Wolk and DuCette, 1971) is that individuals differ to the extent that they attribute reinforcement to their own (internal) or to outside (external) forces. The need to achieve (Wolk and DuCette, 1971) corresponds to a psychogenic need to attain success which is in relation to some implied or stated standard of excellence.

Numerous studies (Brown and Holtzman, 1967; Goldfried and D'Zurilla, 1973; Popham, 1960) have reported the validity and reliability of Brown and Holtzman's (1966) Survey of Study Habits and Attitudes (SSHA) inventory. Studies (Brown and Holtzman, 1967; Prociuk and Breen, 1974) show that the SSHA correlate significantly with academic success. Other studies (Gadzella, 1976; Popham, 1960) show the validity of the SSHA with high and low achievers.

The Rotter I-E Scale (1966), a locus of control inventory used frequently by researchers, was designed to differentiate individuals who are inclined to be either internally or externally oriented in making decisions. Some researchers (Levenson, 1972; Prociuk and Breen, 1974) have noted that the external (E) measure

of the Rotter I-E Scale covers too broad an area to effectively differentiate subjects on this trait. Consequently, Levenson (1972) revised the Rotter I-E Scale primarily in an attempt to differentiate the externally controlled subjects who were influenced by powerful others or those in control of events from subjects who were influenced by fate, chance (luck) factors. The Levenson's scales include several statements of the Rotter I-E Scale and a set of statements designed specifically for the three dimensional locus of control scales referred to as the Levenson's IPC Scales (Internal, Powerful Others, and Chance).

Prociuk and Breen (1974) used the Levenson's locus of control scales to determine whether there were significant relationships between the IPC scales and the SSHA and course grades (GPA). They found no significant differences between the sexes. For the total group, they reported (a) significant and positive correlations between the I measure of the IPC scale and SSHA and GPA, respectively and (b) significant inverse correlations between the I and C measures of the IPC scales with the SSHA and between the C measure and the GPA. The data supported their hypotheses that subjects who perceived course grades as related to their ability and effort would report more effective study habits and attitudes and achieve higher course grades than subjects who believed that course grades were controlled by powerful others (instructors) or by chance factors. They also noted that subjects who believed that chance factors controlled their decision-making achieved lower grades academically than subjects who believed that they were controlled by

powerful others.

Data from studies examining the relationships between locus of control and achieveing tendencies have reported inconsistent findings. Mehrabian (1969; Mehrabian and Banks, 1975) constructed separate male and female scales which measured achieveing tendencies based on Atkinson's model of resultant achievement motivation. Individuals possessing a stronger motive to achieve success than a motive to avoid failure were described as high achievers; whereas, individuals who had a stronger motive to avoid failure than to achieve success were described as low achievers. Mehrabian (1968) found strong relationships between locus of control (Rotter Scale) and the Mehrabian Achieveing Tendency Scale (MATS) for both males and females. In two studies, Wolk and DuCette (1971) obtained low nonsignificant inverse relationships between achieving tendencies (MATS) and locus of control (Rotter Scale). Defferences between the sexes were not investigated. Exploring interactions of achieving tendencies (MATSO and locus of control (Rotter Scale) in various performances (classroom tasks, tests), Wolk and DuCette (1973) reported that achieving tendencies correlated significantly with each of the variables studied for internally controlled subjects but not significantly for the externally controlled. The investigators indicated that locus of control might serve as a significant moderator in predicting the effects of achieving tendency in different types of behavior.

In the present study the measures from the SSHA, IPC, and MATS scales and semester grade-point averages (SGPA) were used to

determine (a) whether there were significant relationships between these variables for college students and for each of the sexes, (b) whether there were significant differences between the sexes in these variables, and (c) which of these variables best predicted the SGPA.

Method

Subjects. The subjects were 120 undergraduates, 39 males and 81 females, enrolled in psychology classes at a large state university. These subjects had voluntarily taken the MATS during their free time. In responding to the MATS, they received a few credit points towards a course grade.

To be included in the research study, subjects signed a research release to ensure their willingness to participate and to assure them that their responses would be kept conficential and used only for research purposes. Interpretation of the student's responses were available to them individually upon their request.

Instruments and Procedure. The three instruments used to collect the data were: Survey of Study Habits and Attitudes, SSHA (Brown and Holtzman, 1967), IPC Locus of Control Scale (Levenson, 1972) and Mehrabian Achieving Tendency Scale, MATS (Mehrabian, 1969). The SSHA and the IPC scales were administered during class periods. Semester grade-point average (SGPA) was obtained from university records.

The SSHA is a 100 item, paper and pencil self-reporting inventory designed to determine how a student functions with relation to study habits and attitudes. To each of the items the

respondent chooses one of the five response options: "rarely," "sometimes," "frequently," "generally," or "almost always." From these responses four primary scales are derived: Delay Avoidance (DA), which measures the extent to which a student avoids delay and distraction; Work Methods (WM), which is an indicator of how effectively a student organizes his materials; Teacher Approval (TA), which discloses a student's general impression of teachers; and Educational Acceptance (EA), which is a representation of a student's agreement with the expressed goals of education. When the DA and WM scales are combined, a Study Habits (SH) score is obtained and when the TA and EA scales are combined, the score yields a Study Attitudes (SA) measure. The summation of the four primary scales (DA, WM, TA, EA) yields an overall Study Orientation (SO) score.

The Levenson's (1972) IPC Scales consist of 24 items in which the respondent reports his reactions to the statements on a Likert format. Scores range 0 - 48 for each of the IPC scales. Those who believe that they exercise control of their lives are considered to be internally controlled (I), those who believe that their decisions are influenced primarily by powerful others or people in power (P) and those who feel that situations occur due to chance factors beyond their control (C).

The Mehrabian Achieving Tendency Scales (1968), for males and females, lists 26 positive and negative statements to which respondents record their responses on a +4 to -4 Likert type format. The total score is derived by finding the difference between

the total correct responses made to items describing high and low achieving individuals.

Three types of analyses were performed with the data collected. Pearson product-moment correlations were computed to determine whether there were significant relationships between the variables for the total groups and for the sexes. T-tests were used to determine differences between the sexes on each of the variables. To determine which variable best predicted the SGPA, a stepwise multiple regression correlation was computed with the SGPA as the criterion and the SH, SA, SO, I, P, C, and MATS measures as variables.

Results and Discussion

The intercorrelations for all variables studied for the total group are reported in Table 1. The data (Table 1) concur with the

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Insert Table 1 about here

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findings summarized by Brown and Holtzman (1967) that there are significant, positive intercorrelations between the SSHA scales. Prociuk and Breen (1974) reported the relationship of only measure of the SSHA (assumingly the total score, Study Orientation, SO) with the IPC scales and GPA. Findings in the present study concur with their findings (Procuik and Breen, 1974) in that, SO is (a) significantly and positively related to SGPA and the I measure of the IPC scales, respectively, and (b) inversely correlated with

with P and C measure of the locus of control scales. However, it is equally important to determine whether all the SSHA scales have similar relationships with these variables. The data in Table 1 confirms that generally most of them do.

According to Levenson (1972), subjects scoring high on the P and C scales of the IPC Scales are influenced by external factors; therefore, the correlation ought to be and is (Table 1) significant and positive. This datum is in agreement with that reported by Prociuk and Breen (1974).

No study was found which examined the relationship between the MATS and SSHA and SGPA, respectively. Data (Table 1) in the present study show that MATS is significantly and positively related to all SSHA scales and significantly by inversely related to the C measures of the IPC scales. However, the MATS were constructed separately for males and females. Therefore, measures on the MATS need to be examined for each of the sexes.

To determine whether there were significant relationships between the variables studied for the sexes, intercorrelations were computed and are reported in Tables 2 and 3.

Insert Tables 2 and 3 about here

The SO scale (of the SSHA) correlated significantly and positively for males (Table 2) and females (Table 3) on the SGPA and only for the females on the I scale of the locus of control scales.

These findings are contrary to those reported by Prociuk and Breen (1974) in that, they reported there were no sex differences on these variables. In addition, the data for the males (Table 2) show significant and positive relationships on only three other SSHA scales (SA, SH, and EA) with the SGPA. For the females (Table 3) data show that (a) there were significant and postive correlations for all SSHA scales, except one (DA), with the I measure of the locus of control, the MATS and the DGPA, respectively, and (b) a number of the SSHA scales correlated significantly by inversely with the P and C measures.

On the IPC scales, significant correlations were found only for the females; the I measure correlated inversely with the P and C measures, respectively, and the P and C measures correlated with each other postively (two external factors). In addition, the I measure correlated significantly with the SGPA for the females.

To determine in which of the variables there were significant differences between the sexes, the means, standard deviations and t-tests are reported in Table 4. Generally, the means on all SSHA scales for this group of students were somewhat low in com-

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Insert Table 4 about here

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parison to the freshman national group (Brown and Holtzman, 1967) indicating that these students could profit from a course in

study habits and attitudes.

Data (Table 4) show that females (a) reported significantly higher scores on the five SSHA scales, two primary (DA and EA) and on SH, SA, and SO, and (b) obtained significantly higher SGPA. Males reported significantly higher scores on the P and C measures of the IPC scales, an indication that they were more influenced by Powerful Others and Chance factors than the females.

No significant difference was found between males and females on the MATS measures. However, if male and female responses to the MATS were analyzed by locus of control groups, as Mehrabian (1968) had done, significant differences might have been found. In addition, MATS was designed to differentiate high and low achievers. To determine if there are significant differences between male and female, high and low achievers on the MATS and SSHA, a larger sample of subjects need to be surveyed and the data analyzed. It is the hope that the data being collected in a study currently in progress will provide the information.

Of the variables studied and employing the stepwise multiple regression correlation, it was found that the measure on Study Habits was the best predictor of SGPA. The multiple regression correlation was .39 significant at .001 level. This information confirms the conviction that psychologists and educators have had for years that effective study habits are associated with academic success.

References

Brown, W. F. and Holtzman, W. H. Survey of Study Habits and Attitudes, Form C. New York: The Psychological Corporation, 1966.

Brown, W. F. and Holtzman, W. H. Survey of Study Habits and Attitudes Manual. New York: The Psychological Corporation, 1967.

Gadzella, B. M. Differences among semester grade-point average (SGPA) groups and changes over the semester on SSHA, Appendix B. Unpublished report submitted to East Texas State University Organized Research. Research Grant No. 1501-9126, 1976.

Goldfried, M. and D'Zurilla, T. Prediction of academic competence by means of the survey of study habits and attitudes. Journal of Educational Psychology, 1973, 64, 116-122.

Levenson, H. Distinctions within the concept of internal - external control: Development of a new scale. Proceedings of the 80th Annual Convention of the American Psychological Association, 1972, 7, 261-262.

Mehrabian, A. Male and female scales of the tendency to achieve. Educational and Psychological Measurement, 1968, 28, 493-502.

Mehrabian, A. Measures of achieving tendency. Educational and Psychological Measurement, 1969, 29, 445-451.

Mehrabian, A. and Bank, L. A manual for the measures of achieving tendency. Los Angeles: University of California, 1975.

Popham, W. J. The validity of SSHA with scholastic overachievers

and underachievers. Educational Research Bulletin, 1960, 39, 214-215.

Prociuk, T. J. and Breen, L. J. Locus of control, study habits and attitudes, and college academic performance. The Journal of Psychology, 1974, 88, 91-95.

Rotter, J. B. Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 1966, 80, No. 1 (Whole No. 609).

Wolk, S. and DuCette, J. Locus of control and achievement motivation: Theoretical overlap and methodological divergence. Psychological Reports, 1971, 29, 775-758.

Wolk, S. and DuCette, J. The moderating effect of locus of control in relation to achievement-motivation variables. Journal of Personality, 1973, 41, 59-70.

Table 1

Intercorrelations of Survey of Study Habits and Attitudes (SSHA) Scales, Locus of Control (IPC), Mehrabian Achieving Tendency Scale (MATS), and Semester Grade-Point Average (SGPA) for Total Group (N=120, df=118)

Variables	Variables											
	DA	WM	SH	TA	EA	SA	SO	I	P	C	MATS	SGPA
(SSHA) Delay Avoidance (DA)	-	.60**	.91**	.41**	.71**	.57**	.80**	.19*	-.01	-.14	.22*	.37**
Work Methods (WM)		-	.88**	.58**	.64**	.65**	.83**	.27**	-.22*	-.24**	.35**	.32**
Study Habits (SH)			-	.55**	.76**	.68**	.91**	.25**	-.12	-.21*	.31**	.38**
Teacher Approval (TA)				-	.77**	.95**	.82*	.24**	-.24**	-.24**	.21*	.22*
Educational Acceptance (EA)					-	.92**	.92**	.29**	-.13	-.28**	.20*	.40**
Study Attitudes (SA)						-	.92**	.27**	-.21*	-.27**	.22*	.31**
Study Orientation (SO)							-	.29**	-.18*	-.26**	.28**	.38**
(IPC) Internally Oriented (I)								-	-.15	-.26**	.11	.18*
Powerful Others (P)									-	.35**	-.16	-.05
Chance Factor (C)										-	-.18*	.19*
(MATS) Mehrabian Achieving Tendency Scale											-	.17
(SGPA) Semester Grade-Point Average												-

*p < .05, **p < .01

Table 2

Intercorrelations of Survey of Study Habits and Attitudes (SSHA) Scales, Locus of Control (IPC), Mehrabian Achieving Tendency Scale (MATS), and Semester Grade-Point Average (SGPA) for Males (N=39, df=37)

Variables	Variables											
(SSHA) Delay Avoidance (DA)	DA	WM	SH	TA	EA	SA	SO	I	P	C	MATS	SGPA
	-	.59**	.88**	.54**	.73**	.64**	.83**	.15	.07	-.13	.12	.51**
Work Methods (WM)		-	.89**	.54**	.63**	.61**	.81**	.19	-.16	-.12	.33*	.31
Study Habits (SH)			-	.60**	.76**	.71**	.92**	.19	-.05	-.14	.25	.46**
Teacher Approval (TA)				-	.78**	.95**	.85**	.16	-.05	-.08	.09	.13
Educational Acceptance (EA)					-	.93**	.92**	.31	.07	-.16	.11	.42**
Study Attitudes (SA)						-	.93**	.24	.00	-.11	.11	.27
Study Orientation (SO)							-	.23	-.02	-.14	.19	.40
(IPC) Internally Oriented (I)								-	.08	-.23	.07	.06
Powerful Others (P)									-	.14	-.30	.26
Chance Factors (C)										-	-.19	-.15
(MATS) Mehrabian Achieving Tendency Scale											-	.17
(SGPA) Semester Grade-Point Average												-

*p < .05
**p < .01

Table 3

Intercorrelations of Survey of Study Habits and Attitudes (SSHA) Scales, Locus of Control (IPC), Mehrabian Achieving Tendency Scale (MATS), and Semester Grade-Point Average (SGPA) for Females (N=81, df=79)

Variables	Variables											
	DA	WM	SH	TA	EA	SA	SO	I	P	C	MATS	SGPA
(SSHA) Delay Avoidance (DA)	-	.59**	.91**	.34**	.68**	.51**	.78**	.21	.02	-.09	.28*	.26*
Work Methods (WM)		-	.87**	.59**	.65**	.66**	.84**	.31**	-.23*	-.29**	.37**	.30**
Study Habits (SH)			-	.51**	.75**	.65**	.90**	.28*	-.10	-.21	.36**	.31**
Teacher Approval (TA)				-	.78**	.96**	.81**	.28*	-.31**	-.30**	.28*	.23*
Educational Acceptance (EA)					-	.92**	.92**	.29**	-.15	-.28*	.29**	.34**
Study Attitudes (SA)						-	.91**	.29**	-.27*	-.31**	.29**	.29**
Study Orientation (SO)							-	.32**	-.21	-.29**	.36**	.33**
(IPC) Internally Oriented (I)								-	-.25*	-.28*	.13	.24*
Powerful Others (P)									-	.43**	-.10	-.14
Chance Factors (C)										-	-.19	-.17
(MATS) Mehrabian Achieving Tendency Scale											-	.19
(SGPA) Semester Grade-Point Average												-

*p < .05
**p < .01

Table 4

Means and Standard Deviations for Variables Studied for the Sexes and T-Tests

		Male(N=39)		Female(N=81)		
		M	SD	M	SD	t-test
I.	Survey of Study Habits & Attitudes (SSHA)					
	Delay Avoidance (DA)	19.18	9.57	24.21	10.59	-2.51**
	Work Methods (WM)	23.59	9.87	26.09	9.01	-1.38
	Study Habits (SH)	42.77	17.33	50.30	17.50	-2.21*
	Teacher Approval (TA)	25.08	10.67	27.58	11.00	-1.18
	Educational Acceptance (EA)	22.13	8.99	28.07	8.24	-3.59**
	Study Attitudes (SA)	47.44	18.45	55.53	18.07	-2.28*
	Study Orientation (SO)	89.97	33.23	105.83	32.29	-2.50**
II.	Locus of Control (IPC)					
	Internally Oriented (I)	35.89	6.67	35.85	6.69	-0.20
	Influenced by Powerful Others (P)	23.13	9.05	19.33	8.49	2.25*
	Chance Factors (C)	20.49	8.89	17.46	8.07	1.86*
III.	Mehrabian Achieving Tendency Scale (MATS)	3.00	17.80	1.25	17.08	0.52
IV.	Semester Grade-Point Average (SGPA)	2.58	0.84	2.92	0.84	-2.09*

*$p \leq .05$
**$p < .01$